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PATENTCLAIM AMENDMENTS

The following listing of claims will replace all prior versions and listings of claims in the instant application. The present status of each claim is indicated in parentheses following the claim number.

1-41 (CANCELLED)

42. (CURRENTLY AMENDED) ~~The~~An isolated or purified nucleic acid
~~of claim 43, wherein said nucleotide encoding a polypeptide~~
~~having the amino acid sequence is nucleotides 13-1314 of SEQ ID~~
~~NO:3-4, said amino acid sequence comprising at least one~~
~~immunogenic epitope.~~

43. (CURRENTLY AMENDED) ~~A~~The nucleic acid comprising a nucleotide
~~sequence encoding a polypeptide having the amino acid of claim 42,~~
~~wherein said nucleic acid sequence comprises nucleotides 13-~~
~~1314 of SEQ ID NO:4, said amino acid sequence comprising at~~
~~least one immunogenic epitope-3.~~

44. (CURRENTLY AMENDED) The nucleic acid of ~~claim 43,~~claim 42,
wherein said nucleic acid is an isolated nucleic acid.

45. (CURRENTLY AMENDED) The nucleic acid of ~~claim 43,~~claim 42
further comprising an expression control sequence operably
linked to said nucleotide sequence.

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46. (PREVIOUSLY PRESENTED) The nucleic acid of claim 45, wherein said expression control sequence comprises a promoter.
47. (PREVIOUSLY PRESENTED) The nucleic acid of claim 45, wherein said expression control sequence comprises an enhancer.
48. (CURRENTLY AMENDED) A method of preparing a polypeptide comprising a carboxy-terminal portion of the heavy chain of botulinum neurotoxin serotype A comprising at least one immunogenic epitope, comprising:
- transfecting a cell with a nucleic acid ~~having a nucleotide sequence encoding~~ a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope; and
- culturing the transfected cell under conditions wherein the nucleic acid is expressed,
- wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell.
49. (PREVIOUSLY PRESENTED) The method of claim 48, further comprising recovering from said transfected cell at least one insoluble polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope.

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50. (PREVIOUSLY PRESENTED) The method of claim 48, wherein said organism is *Escherichia coli*.

51. (PREVIOUSLY PRESENTED) The method of claim 48, wherein said organism is *Pichia pastoris*.

52. (CANCELLED)

53. (CURRENTLY AMENDED) A method of ~~preparing~~isolating an immunogenic ~~composition comprising a~~ polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope, comprising:

culturing a cell transfected with an expression vector comprising a nucleic acid ~~having a nucleotide sequence~~ encoding a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope under conditions wherein the nucleic acid is expressed; and

~~recovering~~isolating from said transfected cell at least one insoluble polypeptide comprising the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope,

wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell and wherein the recovered polypeptide is immunogenic.

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54. (CANCELLED)

55. (CURRENTLY AMENDED) The nucleic acid of claim ~~claim 43~~, claim 42, wherein the AT content is less than about 70% of the total base composition.

56. (PREVIOUSLY PRESENTED) The nucleic acid of claim 55, wherein the AT content is less than about 60% of the total base composition.

57-81 (CANCELLED)

82. (PREVIOUSLY PRESENTED) A recombinant host cell comprising the nucleic acid of claim 45.

83-84 (CANCELLED)

85. (PREVIOUSLY PRESENTED) The recombinant host cell of claim 82, wherein said polypeptide is at least 0.75% (w/w) of the total cellular protein.

86. (PREVIOUSLY PRESENTED) The recombinant host cell of claim 85, wherein said polypeptide is at least 20% (w/w) of the total cellular protein.